

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

AUTOMOTIVE TECHNOLOGIES
INTERNATIONAL, INC.,

Case No. 02-73572

Plaintiff,

Honorable Nancy G. Edmunds

v.

TRW VEHICLE SAFETY SYSTEMS, INC.,

Defendant.

/

**ORDER ACCEPTING AND ADOPTING SPECIAL MASTER'S REPORT AND
RECOMMENDATION DATED AUGUST 2006, GRANTING IN PART AND DENYING
IN PART DEFENDANT'S MOTION FOR SUMMARY JUDGMENT OF INVALIDITY
[82], DENYING DEFENDANT'S MOTION FOR SUMMARY JUDGMENT OF NON-
INFRINGEMENT [83, 124], DENYING PLAINTIFF'S MOTION TO STRIKE
PARAGRAPHS 2-10 OF THE DECLARATION OF BRUCE HILL [121], AND
DENYING WITHOUT PREJUDICE PLAINTIFF'S MOTION *IN LIMINE* TO EXCLUDE
EVIDENCE REGARDING THE ALLEGED PRIOR ART "AUTOLIV" AND "TRW"
DEVICES [122]**

Automotive Technologies International, Inc. ("ATI") is the proprietor of U.S. Patent No. 6,250,668 ("the '668 Patent"), titled "Tubular Airbag, Method of Making the Same and Occupant Protection System Including the Same." The '668 Patent relates to air bags, for use in automobiles and other vehicles, that protect occupants during crashes or roll overs. The Patent's abstract describes the invention as an "airbag for a vehicle formed from sections of material that are joined to one another, e.g., heat-sealed or adhesively-sealed, such that interconnected compartments receivable of an inflating medium are formed." David S. Breed and William Thomas Sanders are the named inventors of the '668 Patent.¹

¹Mr. Sanders is deceased.

After the '668 Patent was issued, ATI sued TRW Vehicle Safety Systems, Inc. ("TRW"). In response to an earlier referral, the Special Master provided recommended constructions of certain limitations of the claims of the '668 Patent in two reports dated June 18, 2004 and July 15, 2004. This Court accepted and adopted these constructions in an Order dated August 4, 2004.

This patent litigation is now before the Court in response to motions that were subsequently referred to the Special Master for resolution. TRW brings two motions for summary judgment. One addresses the invalidity of the '668 patent, arguing that each of the asserted claims of the '668 Patent fails to meet the Patent Act's standards of novelty and nonobviousness. In the other, TRW argues that many of the accused products do not infringe the asserted claims of the '668 Patent as a matter of law.

The Special Master recommends that TRW's motion for summary judgment of invalidity be GRANTED IN PART AND DENIED IN PART. It is recommended that the motion be GRANTED as to claims 1, 2, 4-6, 9-13, 15, 20-26, 28-31, 35-37, and 39-45 of the '668 Patent and DENIED as to claims 17, 18, 27, 32, 33, and 38 of the '668 Patent.² The Special Master further recommends that TRW's motion for summary judgment of non-infringement be DENIED.

ATI also brings two motions. The first is a discovery motion seeking to strike paragraphs 2-10 of the declaration of Bruce Hill because of TRW's purported violation of its discovery obligations. The second is a motion *in limine* seeking to exclude evidence regarding the alleged prior art "Autoliv" and "TRW" devices. The Special Master

²The remaining claims of the '668 Patent – claims 3, 7, 8, 14, 16, 19, and 34 – were not asserted by ATI in this action.

recommends that both of these motions be DENIED, the latter being DENIED WITHOUT PREJUDICE.

ATI and TRW have filed Objections to the Special Master's Report and Recommendation ("R&R"). ATI objects to the Special Master's recommendations as to invalidity, and TRW objects to the Special Master's recommendations as to non-infringement.

Specifically, ATI's Objections argue that (1) the inventor of the '668 Patent, Dr. Breed, has presented evidence that sufficiently corroborates his claim that he was the first to invent the claimed invention and did so in October 1993, thus defeating TRW's argument that its '924 Patent is "prior art"; (2) it would not have been obvious for a skilled artisan to combine the teachings of the TRW '924 Patent with the Kokeguchi '412 Patent or Backhaus '529 Patent; and (3) the commercial success evidence found sufficient to defeat summary judgment on the issue of obviousness is broad enough to cover all of the claims, not just the ones that the Special Master found that they related to.

TRW's Objections argue that, because no genuine issues of material fact exist on the issue of infringement, there is no infringement as a matter of law.

For the reasons stated below, this Court Accepts and Adopts the Special Master's Report and Recommendation and thus GRANTS IN PART AND DENIES IN PART TRW's motion for summary judgment of invalidity, DENIES TRW's motion for summary judgment of non-infringement, DENIES ATI's motion to strike paragraphs 2-10 of the declaration of Bruce Hill, and DENIES WITHOUT PREJUDICE ATI's motion *in limine* to exclude evidence regarding the alleged prior art "Autoliv" and "TRW" devices.

I. Standard of Review

This Court reviews the Special Master's Report and Recommendation *de novo*. See 28 U.S.C. §§ 636(b)(1)(B) and (C).

II. Analysis

A. ATI's Objections As to Invalidity

1. Standard of Review

Under Rule 56 of the Federal Rules of Civil Procedure, the movant is entitled to judgment as a matter of law if, drawing all factual inferences in favor of the non-movant, there are no genuine issues of material fact. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 251-52 (1986); *Combined Sys., Inc. v. Defense Tech. Corp.*, 350 F.3d 1207, 1209 (Fed. Cir. 2003).

2. Anticipation/Prior Art

a. General Principles

“A patent is invalid for anticipation if a single prior art reference discloses each and every limitation of the claimed invention.” *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1377 (Fed. Cir. 2003). “[A]nticipation is a question of fact, [that] may be decided on summary judgment if the record reveals no genuine dispute of material fact.” *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1327 (Fed. Cir. 2001).

b. R&R and ATI Objection Re: Finding TRW '924 Patent is Prior Art

TRW identifies several potential prior art references it believes to be pertinent to the '668 Patent, and ATI contests the relevancy of those references. ATI's first Objection challenges the Special Master's conclusion that one of TRW's patents, U.S. Patent No. 5,524,924 (“the TRW '924 Patent”) is prior art against the '668 Patent. (R&R at 15-20.)

The TRW '924 Patent issued on June 11, 1996, based upon an application filed at the U.S. Patent & Trademark Office on November 15, 1993. If the TRW '924 Patent is to qualify as prior art against the '668 Patent, it must do so under 35 U.S.C. § 102(e)(2). That statute provides, in pertinent part, that "a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent" shall be considered prior art. The TRW '924 Patent unquestionably qualifies as "a patent granted on an application for patent by another filed in the United States. . . ." *Id.* The parties' dispute, however, focuses on whether the TRW '924 Patent's filing date occurred "before the invention by the applicant for patent" – in this case Dr. Breed. Dr. Breed claims that he invented first; i.e., in October 1993. So, he tries to prove that and thus defeat TRW's motion for summary judgment on invalidity.

Relevant case law teaches that corroborating evidence is required to prove oral testimony by Dr. Breed that he was the first to invent.

The application that ultimately matured into the TRW '924 Patent was filed on November 15, 1993. In comparison, the first of the numerous applications that resulted in the '668 Patent was filed about six months later, on May 23, 1994. For purposes of TRW's summary judgment motion, unless there is a genuine issue of material fact that Dr. Breed is entitled to a date of invention prior to the '668 Patent's filing date, the TRW '924 Patent will qualify as prior art under § 102(e)(2).

Thus, to defeat TRW's motion, Dr. Breed must establish that a genuine issue of material fact exists as to his prior date of conception, coupled with diligence from that date of conception until the date of a reduction to practice. See 21 C.F.R. § 1.131(b) (to antedate a reference, an inventor must demonstrate "conception of the invention prior to

the effective date of the reference coupled with due diligence from prior to said date to a subsequent reduction to practice or to the filing of the application.”)

“Conception is defined as the ‘formation in the mind of the inventor, of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice.’” *Stern v. Trustees of Columbia University*, 434 F.3d 1375, 1378 (Fed. Cir. 2006) (quoting *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1376 (Fed. Cir. 1986) (emphasis added)). The conception must encompass all limitations of the claimed invention. *Kridl v. McCormick*, 105 F.3d 1446, 1449 (Fed. Cir. 1997).

Under controlling case law, “when a party seeks to prove conception via the oral testimony of a putative inventor, the party must proffer evidence corroborating that testimony.” *Chen v. Bouchard*, 347 F.3d 1299, 1309 (Fed. Cir. 2003). The Federal Circuit employs a “rule of reason” to determine whether sufficient corroborating evidence exists. *Singh v. Brake*, 317 F.3d 1334, 1341 (Fed. Cir. 2003). Under this standard, an “evaluation of all pertinent evidence must be made so that a sound determination of the credibility of the inventor’s story may be reached.” *Price v. Symsek*, 988 F.2d 1187, 1195 (Fed. Cir. 1993). “[E]ach corroboration case must be decided on its own facts with a view to deciding whether the evidence as a whole is persuasive.” *Cooper v. Goldfarb*, 154 F.3d 1321, 1331 (Fed. Cir. 1998) (citation omitted).

The Federal Circuit has further stipulated that “no similar condition of ‘corroboration’ is imposed on an inventor’s notebook, or indeed on any documentary or physical evidence, as a condition for its serving as evidence. . . .” *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1169 (Fed. Cir. 2006). The Federal Circuit Court of Appeals has instead stated that documentary evidence should be reviewed and given the weight its contents deserve. *Id.*

at 1170.

In this case, as the Special Master observed, Dr. Breed asserts that he and Dr. Sanders invented the technology of the '668 Patent in 1993. (Breed Decl. ¶ 14.) To corroborate this oral testimony, ATI proffers the following:

1. an October 9, 1993 cover letter from Dr. Breed to his patent attorney, Karl F. Milde, Jr., referencing "FILM AIRBAG - ATI 46" and enclosing a "draft copy of a patent application" (ATI Obj., Ex. 1);
2. an October 15, 1993 letter from Dr. Breed's patent attorney, Karl Milde, acknowledging his letter in connection with, *inter alia*, ATI 46 (ATI Obj., Ex. 4);
3. Karl Milde's Declaration averring that:
 - . he was Dr. Breed's patent attorney during the relevant time period,
 - . "it was not unusual" for Dr. Breed to communicate patent-related information to him by mail,
 - . Dr. Breed would also send him "electronic floppy disks containing drafts of patent specifications for potential patent applications and Dr. Breed's suggestions for potential claims from those draft applications",
 - . it was his job as Dr. Breed's counsel to transform those drafts into applications,
 - . the October 1993 letter was "of the type Dr. Breed customarily wrote" to him during that time period and was "meant to serve as invention disclosure documents for purposes of dating an invention in accordance with the U.S. patent laws",
 - . he has no reason to doubt that the letter was in fact sent on the date indicated,
 - . he has "no reason to doubt that the draft application that resides in Mr. Roffe [Dr. Breed's current patent counsel]'s files was in fact attached to the October 9, 1993 letter from Dr. Breed",
 - . "it is the type of draft application that I would receive from Dr. Breed in connection with planned patent applications",
 - . because he has not represented ATI since early 1994, he "destroyed all of the ATI-related files held by my former practice in the ordinary course of business",
 - . he did, at Dr. Breed's request, "send pending files to another patent attorney, Dr. Samuel Shipkovitz" who he understands was subsequently replaced by Mr. Roffe as ATI's primary patent attorney.

(ATI Obj., Ex. 3).

In sum, Attorney Milde declares that he got the October 9, 1993 cover letter but has no documentary evidence confirming the content of the enclosure. In fact, as stated in Milde's declaration, to the best of his knowledge the actual enclosure that accompanied the transmittal letter was destroyed. Without evidence about the content of the October 9, 1993 enclosure, there is no corroborating evidence that it was the same draft application contained in the record or that it showed that Dr. Breed had conceived, as of that date, of the complete and operative invention described in the '668 Patent.

A draft application prepared by Dr. Breed is included in the record (R&R at 18).³ (ATI Obj., Ex. 2.) ATI, relying on Dr. Breed testimony, argues that this is the same draft application that accompanied the October 9, 1993 transmittal letter. (Breed Decl. at ¶ 21; Breed 9/30/05 Dep. at 10). The Special Master observed, however, that this draft application (ATI Obj., Ex. 2) is undated and there is no corroborating documentary evidence connecting it to the October 9, 1993 transmittal letter. The Special Master further observed that although the "ATI 46" code on the October 9, 1993 transmittal letter corresponds to the list of names of electronic documents proffered by ATI and showing that they were last modified prior to November 15, 1993, the contents of the referenced documents have not been made a part of the record. (Breed Decl. ¶ 22.)

Accordingly, the Special Master concluded that, under the evidence presented, "Dr.

³ATI makes much of a statement on the next page of the R&R that states "[t]he draft patent application is not itself of record in this litigation" (R&R at 19.) ATI misses the point. It is not disputed that a draft patent application for the '668 Patent is in the record. The R&R discusses it on page 18. The Special Master apparently meant to clarify on page 19 that a physical copy of the actual draft patent application that accompanied the October 9, 1993 transmittal letter is not itself in the record in this litigation and, as stated in Milde's declaration, is believed to have been destroyed.

Breed's date of invention could not be reasonably inferred" and thus, "as a matter of law, ATI cannot establish that Dr. Breed conceived of the invention of the '668 Patent prior to the November 15, 1993 filing date of the TRW '924 Patent." (R&R at 18, 19). Specifically, the Special Master observed that none of the corroborating evidence presented by ATI "in any way links the October 9, 1993, transmittal letter to any particular disclosure of airbag technology." (R&R at 19.) "With no other indicia linking these two documents, the assertion that the draft application [ATI Obj., Ex. 2] that ultimately matured into the '668 Patent accompanied the October 9 1993, cover letter is, with respect to corroborating evidence, no more than conjecture." (R&R at 19.)

The Special Master clarified that he was not questioning or weighing Dr. Breed's credibility. Rather, following well-established principles of patent law, he evaluated whether the inventor's assertions concerning dates of inventive activity were "accompanied by corroborating evidence." (R&R at 19, citing *Chen v. Bouchard*, 347 F.3d at 1309 ("It is well established that when a party seeks to prove conception via the oral testimony of a putative inventor, the party must proffer evidence corroborating that testimony.")) . The Special Master found "a complete failure of proof of Dr. Breed's date of conception" and concluded that "assigning any particular time frame to this event based upon the corroborating evidence would amount to speculation." (R&R at 19). "Because no reasonable jury could conclude that Dr. Breed invented the technology of the '668 Patent prior to the filing date of the TRW '924 Patent," the Special Master recommended "that the TRW '924 Patent be considered prior art under § 102(e)(2) with respect to the '668 Patent." (R&R at 20).

The Court accepts and adopts the Special Master's recommendation and overrules ATI's objections.

The draft patent application that is in the record is undated and can be connected to the October 9, 1993 transmittal letter only by speculation (inference layered upon inference). The declaration of Dr. Breed's patent attorney at that time, Karl Milde, does not sufficiently corroborate Dr. Breed's assertion that he was the first to invent the claimed invention and did so in October 1993. The Milde declaration talks about his and Dr. Breed's pattern and practice but does not say that he read the enclosed draft patent application and understood the invention to be that claimed in the '668 Patent. No written draft patent application with a date on it has been produced from Milde's files. In fact, Milde declares that, to the best of his knowledge, such files were all destroyed.

3. R&R and ATI Objection Re: Obviousness

In its motion for summary judgment, TRW asserts that numerous claims of the '668 Patent are invalid for failure to satisfy the statutory nonobviousness requirement. The Patent Act instructs that “[a] patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. § 103(a).

ATI's objects to the Special Master's conclusions “that a person of ordinary skill in the art would have been motivated to combine the teachings of the Kokeguchi '412 Patent and the TRW '924 Patent in order to achieve” (1) the invention of claim 5, 6, 15, 25, 35, 36, 40, 41, 42, 43, and 44 of the '668 Patent “with a reasonable probability of success” (R&R at 46-53, 54-60). ATI further objects to the Special Master's conclusions “that a person of

ordinary skill in the art would have been motivated to combine the teachings of the TRW '924 Patent and the Backhaus '529 Patent in order to achieve" the invention of claims 22, 23, and 28 of the '668 Patent." (R&R at 51-52.)

For the reasons set forth below, this Court accepts and adopts the Special Master's analysis and conclusions and overrules ATI's objections.

a. General Principles

The ultimate determination of obviousness "is a legal conclusion based on underlying questions of fact. . . ." *Verlander v. Garner*, 348 F.3d 1359, 1363 (Fed. Cir. 2003). The underlying factual issues, known as the *Graham*⁴ factors, consist of: "(1) the scope and content of the prior art; (2) differences between the prior art and the claims at issue; (3) the level of ordinary skill in the pertinent art; and (4) evaluation of any relevant secondary considerations." *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 411 F.3d 1332, 1336 (Fed. Cir. 2005). Pertinent secondary considerations include "commercial success, unexpected results, copying, long-felt but unresolved need, and the failure of others to develop the invention." *Syntex (U.S.A.) LLC v. Apotex, Inc.*, 407 F.3d 1371, 1378 (Fed. Cir. 2005).

b. Scope and Content of the Prior Art

Three prior art patents form the basis for TRW's assertions that certain claims of the '668 Patent are invalid for obviousness. The first, the TRW '924 Patent, is described at length in the R&R and generally concerns "an inflatable vehicle occupant restraint apparatus to restrain movement of an occupant of a vehicle upon a side impact against the

⁴*Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966).

vehicle.” (R&R at 15 quoting TRW ‘924 Patent, Col. 3, Lines 37-39.) The second, U.S. Patent No. 4,963,412 (“the Kogekuchi ‘412 Patent”), teaches the use of film and fabric in the construction of airbags and qualifies as prior art against the ‘668 Patent. The third, U.S. Patent No. 4,944,529 (“the “Backhaus ‘529 patent”), teaches the use of an adhesive or heat sealing to join the two sides of the airbag and also qualifies as prior art against the ‘668 Patent under § 102(b). (R&R at 44-45).

c. Differences Between the Prior Art and the ‘668 Patent

1. Motivation to Combine the Kogekuchi ‘412 Patent and the TRW ‘924 Patent To Achieve the Invention of Claims 5, 6, 15, 25, 35- 36, and 40-44 of the ‘668 Patent.

- Claim 5

Claim 5 of the ‘668 Patent depends from claim 1. Claim 5 recites that “said sheets of material are made of film.” This phrase has been construed to mean that the sheets must be made “at least partially of film.” (8/4/04 Order accepting and adopting Special Master’s R&R). The Special Master observed that, even though he concluded that the TRW ‘924 Patent anticipates claim 1 of the ‘668 Patent, the TRW ‘924 Patent does not disclose that an air bag can be manufactured using film. (R&R at 45). TRW argues that the prior art – the Kogekuchi ‘412 Patent – fills the gap. The Kogekuchi ‘412 Patent explains that “[a]n obvious candidate for the bag material, of course, is a polymeric film.” (R&R at 45 quoting Kogekuchi ‘412 Patent, Col. 1, Lines 37-38.) TRW, in its motion for summary judgment, argues that it would have been obvious for a skilled artisan to construct the air bag of the TRW ‘924 Patent using film. ATI argues to the contrary.

ATI cites authority from the Federal Circuit observing “that if all the elements of an

invention are found in a combination of prior art references: ‘a proper analysis under § 103 requires, *inter alia*, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have been revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success.’’ *Medichem*, 437 F.3d at 1164 (quoting *Verlander*, 348 F.3d at 1363). ATI argues that there is no motivation for a skilled artisan to combine the teachings of the TRW ‘924 Patent and the Kogekuchi ‘412 Patent in order to produce the invention of claim 5 of the ‘668 Patent. The Special Master disagreed with ATI. This Court does as well.⁵

First, the Special Master properly observed that the Federal Circuit recognizes that ‘many factors are relevant to the motivation-to-combine aspect of the obviousness inquiry, such as the field of the specific invention, the subject matter of the references, the extent to which they are in the same or related fields of technology, the nature of the advance made by the applicant, and the maturity and congestion of the field.’ *In re Johnston*, 435 F.3d 1381, 1385 (Fed. Cir. 2006) (R&R at 46).

Considering these factors, the Special Master correctly concluded ‘that a person of ordinary skill in the art would have been motivated to combine the teachings of the Kogekuchi ‘412 patent and the TRW ‘924 patent in order to produce the invention of claim 5 of the ‘668 Patent with a reasonable probability of success.’’ (R&R at 46). The Special

⁵Despite ATI’s arguments that a ‘skilled artisan’ would have had to have been motivated to combine the prior art teachings in the particular manner it sets forth in its Objections at 7, ATI does not identify where this is stated in the ‘668 Patent’s claims. Claims define the invention; not bullet points.

Master reached this conclusion because:

- (1) all three patents lie in the identical field – that of air bags;
- (2) the TRW '924 Patent does not identify the sorts of materials that can be used to manufacture air bags and thus a skilled artisan desiring an explicit source of an appropriate air bag material would turn to references such as the Kokeguchi '412 Patent which expressly identifies film;
- (3) the Kokeguchi '412 Patent states that “[t]hermoplastic polymeric films can be vacuum-formed to give the air bag a desired shape and can be fusion-bonded, which is a more economical manufacturing technique than sewing”, Col. 1, Lines 38-41;
- (4) as observed by the Federal Circuit, the desire to reduce production costs can provide a motivation to combine the teachings of prior art references; and
- (5) the same motivation would have incented a skilled artisan to employ film to manufacture the air bag described by the TRW '924 Patent, thereby leading to the invention of the '668 Patent.

(R&R at 46-47).

Simply stated, the Special Master reasoned that a skilled artisan would have to make the airbag out of some material, so it would be logical to look to the Kokeguchi '412 Patent that says use film. The TRW Patent has been construed to mean that the sheets of material must be made “at least partially of film” and does not say what material is to be used. The prior art -- Kokeguchi '412 Patent – explains that an obvious candidate for the bag material is polymeric film. The Kokeguchi '412 Patent teaches the use of film and fabric in the construction of airbags. (R&R at 44). “[T]he Kokeguchi '412 Patent is identified and discussed within the [ATI] '668 Patent instrument itself.” (R&R at 48). Accordingly, this Court accepts and adopts the Special Master’s recommendation that TRW’s motion for summary judgment of invalidity be granted with respect to this claim of the '668 Patent.

- Claims 6, 15, 25, 35-36, and 40-44

Contrary to ATI's objections, the Special Master did consider, as required under prevailing precedent, the proper factors and evidence in support of his conclusion that a skilled artisan would also have been motivated to combine the teachings of the Kokeguchi '412 patent and the TRW '924 patent in order to achieve the invention of claims 6, 15, 25, 35-36, and 40-44 of the '668 Patent with a reasonable probability of success. Accordingly, this Court accepts and adopts the Special Master's recommendation that TRW's motion for summary judgment of invalidity be granted with respect to these claims of the '668 Patent.

2. Motivation to Combine the TRW '924 Patent and the Backhaus '529 Patent To Achieve the Invention of claims 22, 23, and 28 of the '668 Patent."

Claims 22 and 23 are dependent upon claim 21 of the '668 Patent. As the Special Master observed, claim 22 requires that "the step of joining the sheets of material to one another comprises the step of applying an adhesive between opposed surfaces of the sheets of material to be joined to one another." (R&R at 50.) Claim 23 requires that "the step of joining the sheets of material to one another comprises the step of heating the sheets of material at the locations where they are to be joined to one another." (R&R at 50-51.) The Backhaus '529 Patent provides in pertinent part that:

In a preferred mode the seams are made with an adhesive compatible with the material of the web 26; but they may also be made by any other method known in the art, including, for instance, heat sealing.

(R&R at 51, quoting Backhaus '529 Patent at Col. 4, Lines 32-35.)

This Court accepts and adopts the Special Master's analysis and conclusion that "a person of ordinary skill in the art would have been motivated to combine the teachings of

the TRW '924 Patent and the Backhaus '529 Patent in order to achieve the invention of claims 22, 23 and 28 of the '668 Patent." (R&R at 51, 52.) Each of the Patents arises in the field of air bags. See *Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F.3d 1461, 1472 (Fed. Cir. 1997). Moreover, the TRW '924 Patent relates to an air bag that incorporates seams but does not articulate how those seams should be formed. "A skilled artisan desiring an explicit explanation of methods of forming seams in air bags would turn to references such as the Backhaus '529 Patent, which describes the use of adhesives and heat sealing." (R&R at 51, citing *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996).) Accordingly, this Court accepts and adopts the Special Master's recommendation that TRW's motion for summary judgment of invalidity be granted with respect to these claims of the '668 Patent.

d. Evaluation of Relevant Secondary Considerations – Commercial Success

The Special Master agreed with ATI "that the record establishes factual issues concerning the secondary consideration of commercial success that render summary judgment of obviousness inappropriate" with respect to claims 17, 18, 27, 32, 33 and 38 of the '668 Patent. (R&R at 41-44.) The Special Master considered the expert report of ATI's damages expert John Plumpe. (*Id.*) He determined that "[t]he Plumpe report is alone insufficient to demonstrate the secondary consideration of commercial success under established patent precedent." (R&R at 42.) "Because the Plumpe report does not connect the marketplace success of side impact air bags with the technical advantages of the invention of the '668 Patent, it would not contribute to the obviousness determination in and of itself." (R&R at 42.) The Special Master then observed that ATI uses Dr. Breed's Declaration to fill this gap. "Dr. Breed's thorough analysis both describes the technical

merits of the subject matter claimed in the ‘668 Patent, and connects these merits to the commercial success enjoyed by that design.” (R&R at 42-43.) Accordingly, the Special Master concluded that “the record establishes genuine issues of material fact with respect to those claims that recite the features Dr. Breed identified as contributing to the commercial success of side curtain airbags.” (R&R at 43 (emphasis added).) “Of the asserted claims of the ‘668 Patent, claims 17, 18, 27, 32, 33, and 38 specifically call for side curtain airbags.” (R&R at 43.) Thus, because evidence showing the nexus between commercial success and the claimed features was presented on these six claims, the Special Master concluded that summary judgment of obviousness would therefore be inappropriate. (R&R at 44.)

ATI objects to the Special Master’s recommendation, arguing that the evidence presented and found sufficient to save the above six claims from summary judgment on obviousness should likewise save the remaining claims. The problem is ATI ignores case law observing that these commercial success arguments apply only when there is evidence connecting patent claims with technical features to the alleged commercial success. Accordingly, this Court accepts and adopts the Special Master’s recommendation that TRW’s motion for summary judgment of invalidity be denied with respect to claims 17, 18, 27, 32, 33, and 38 of the ‘668 Patent. It is granted as to the remaining claims.

B. TRW’s Objections

TRW has no objections to the Special Master’s recommendations as to its motion for summary judgment on invalidity. Its objections address the Special Master’s recommendation that its motion for summary judgment of non-infringement be denied.

The Special Master concluded that, as to all the Claims at issue, genuine issues of

material fact existed thus precluding summary judgment.

After stating the general principles governing the determination of infringement, the Special Master properly observed that “[s]ummary judgment is appropriate when it is apparent that only one conclusion as to infringement could be reached by a reasonable jury.” (R&R at 62, quoting *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1323 (Fed. Cir. 2001).) The Special Master also properly observed that “[s]ummary judgment of infringement is appropriate where the patent owner’s proof is deficient in meeting an essential part of the legal standard for infringement, since such failure will render all other facts immaterial.” (R&R at 62-63, quoting *Telemac*, 247 F.3d at 1323).

Although the Special Master determined that all but 6 claims were invalid (claims 17, 18, 27, 32, 33, and 38), he addressed TRW’s arguments non-infringement arguments as to all asserted claims. (R&R at 61.)

1. “A Plurality of Sheets of Material”

The Special Master first observed that “[c]laims 1-6, 9-13, 15, 17, 18, 20-25, and 45 of the ‘668 Patent each require the recited product to incorporate a ‘plurality of sheets of material.’” (R&R at 63.) That limitation was previously construed to mean “at least two pieces of material, with each piece having a fairly broad surface relative to its thickness.” (8/4/04 Order accepting and adopting Special Master’s R&R, as supplemented by 7/15/04 R&R.)

The Special Master rejected TRW’s arguments that it cannot infringe the “plurality of sheets of material” claims as a matter of law because, by virtue of its use of the One Piece Woven (OPW) technique, only one piece of fabric goes into the loom and one piece of fabric comes out of the loom (albeit with pockets that hold air). Relying on a similar

argument raised and rejected in *Vanguard Products Corp. v. Parker Hannifin Corp.*, 234 F.3d 1370 (Fed. Cir. 2000) and the text of the '668 Patent, the Special Master concluded that "the limitation 'a plurality of sheets of material' refers not to the method by which the airbag is made, but rather to the completed airbag itself." (R&R at 65.) Thus, as the Special Master observed, "TRW's assertion that, during the manufacturing process of its OPW airbags, no separate pieces of material are joined through a distinct sewing or folding step, is simply besides the point with respect to the asserted 'plurality of sheets of material' claims of the '668 Patent." (R&R at 65.) Rather, what is required is a comparison of "the structural relationship of the components of the OPW airbag." (R&R at 66.) These are product, not process claims. Drawing all justifiable inferences in favor of the non-moving party (ATI), the Special Master determined that he could not "conclude as a matter of law that the opposite sides of the compartments do not qualify as 'two pieces of material' simply because they intermittently are combined in order to form the joints between the compartments." (R&R at 66.) Because questions of material fact were found to exist, the Special Master recommended that TRW's motion for summary judgment of noninfringement be denied with respect to the limitation "a plurality of sheets of material." (R&R at 66.)

This Court accepts and adopts the Special Master's recommendation. Despite TRW's claims to the contrary, drawing all justifiable inferences in favor of ATI, and considering testimony of ATI's experts Dr. Beholz and Dr. Watson and proffered micrographs, this Court agrees that questions of material fact exist as to whether the accused OPW airbags incorporate the limitation "a plurality of sheets of material."

2. "Made of Film"

The Special Master next observed that “[c]laims 5-6, 15, 35, 39-42, and 44 of the ‘668 Patent each call for either sheets or sections of material that ‘are made of film.’” (R&R at 66.) The limitation “made of film” has been construed by this Court to mean “made at least partially of film.” (8/4/04 Order accepting and adopting Special Master’s R&R, as supplemented by 7/15/04 R&R.) The Special Master properly observed that TRW’s non-infringement position here was likewise “founded upon its manufacturing process.” (R&R at 67.) “According to TRW, its manufacturing method provides two separate reasons why film does not play a role in the formation of the compartments of its OPW airbags: First, because the film is applied after the chambers have already been formed, and second, because the compartments are formed in the interior of the airbag, while the film is applied to the exterior of the airbag.” (R&R at 67.) The Special Master rejected TRW’s arguments, finding that they sought to impermissibly limit the product claims of the ‘668 Patent by their method of manufacture. (R&R at 68, citing *3M Innovative Properties Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371 (Fed. Cir. 2003), and *Vanguard Prods.*, 234 F.3d at 1372.) Considering governing Federal Circuit case law and the wording of the ‘668 Patent, the Special Master concluded that “the scope of claims 5, 6, 15, 35, and 39-42, and 44 is not restricted to any particular method of manufacturing the claimed product.” (R&R at 68.) “When these product claims call for sheets or sections of material that ‘are made of film,’ they are therefore referring to a passive, structural feature of the claimed air bag. These product claims do not require that the claimed airbags be manufactured via any particular sequence of steps, and in particular that each of the airbag’s components be incorporated into the product simultaneously.” (R&R at 68.) Accordingly, the Special Master recommended that TRW’s motion for summary judgment of non-infringement be denied as

to these claims. This Court accepts and adopts this recommendation. TRW's objections are overruled.

The Special Master then observed that claims 25 and 43 of the '668 Patent "calling for sections of material 'made out of film' are drafted in process format" and "concern a method for manufacturing an airbag for a vehicle. . . ." (R&R at 69.) He rejected TRW's argument that the limitation calling for a "sheet of film" must be performed simultaneously with an initial joining of sections of material. "The language of claims 25 and 43 'neither grammatically or logically indicate[]' that the steps must be performed in any particular order." (R&R at 70, quoting *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1370 (Fed. Cir. 2003).) Accordingly, the Special Master recommended that TRW's motion for summary judgment of non-infringement be denied as to these claims. (R&R at 70.) This Court accepts and adopts this recommendation and overrules TRW's objections.

3. "The Periphery of Said First and Second Material Layers"

The Special Master observed that "[c]laims 26-33, 36-38, and 44 of the '668 Patent call for the air bag's material layers to be joined at locations 'other than the periphery of said first and second material layers'" and that, once again, TRW's non-infringement arguments rely on its use of the OPW manufacturing process. (R&R at 70-71.) The Special Master concluded that "use of the OPW manufacturing process technique does not dispose of the question of infringement" with respect to this limitation "as a matter of law." (R&R at 72.) He observed that, "ATI expert Dr. Beholz explains, and TRW concedes, that microscopic analysis of the yarn density within the seams of its OPW airbags reveals it to be twice that within each layer of the two-layer cells." (R&R, citing Exhibit D to the Expert Report of Dr. Watson.) Thus, drawing all inferences in favor of ATI, the Special Master

concluded that “the OPW process simply provides one way to form joints between two identifiable layers of material that form the cells of the airbag. Under this competing view, the two material layers would be joined at [] locations ‘other than the periphery of said first and second material layers,’ as claims 26-33, 36-38, and 44 of the ‘668 Patent require.” (R&R at 72.) Because a genuine issue pertaining to the factual issue of infringement exists, the Special Master recommended that TRW’s motion for summary judgment of non-infringement be denied as to these claims.

This Court accepts and adopts the Special Master’s recommendation. Despite TRW’s objections to the contrary, this Court concludes that a genuine issue of material fact exists whether two material layers would be joined at locations “other than the periphery of said first and second material layers,” as claims 26-33, 36-38, and 44 of the ‘668 Patent require.

4. “Substantially Straight Compartments”

Finally, the Special Master observed that “[e]ach independent claim of the ‘668 Patent requires the formation of “substantially straight” cells or compartments.” (R&R at 73.) This Court has construed the term “substantially straight” to mean “straight along nearly the entire length of the joint forming the compartment.” (8/4/04 Order accepting and adopting Special Master’s R&R, as supplemented by 7/15/04 R&R.)

The Special Master further observed that “[a]ll but one of the asserted claims of the ‘668 Patent employs the ‘comprising’ transition phrase. In accordance with fundamental patent law principles, each of the compartments of an accused airbag[] need not be ‘substantially straight’ in order to infringe claims of the ‘668 Patent. Rather, only ‘at least two’ of these compartments need be substantially straight.” (R&R at 73, citing

ResQNet.com, Inc. v. Lansa, Inc., 346 F.3d 1374, 1382 (Fed. Cir. 2003).) Considering TRW's and ATI's arguments and supporting evidence, as well as his own review of the images of inflated airbags, the Special Master concluded that "a genuine issue of material fact exists as to whether the accused airbags incorporate at least two 'substantially straight' compartments or not." (R&R at 74.) Drawing all inferences in favor of ATI, the Special Master concluded that "each of the inflated airbags appears to have an upper or lower compartment, running parallel to the top or bottom of the vehicle door, that could fairly be described as rectangular in shape", and "[a] rectangular compartment is necessarily bounded by 'substantially straight' seams." (R&R at 74.) He further concluded that "each of the airbags incorporates at least one other compartment that, while not rectangular in shape, could arguably be described as defined by 'substantially straight' seams." (R&R at 74-75.) Finding a genuine issue of material fact exists on the issue whether the accused airbags include at least two "substantially straight" compartments, the Special Master recommended that TRW's motion for summary judgment of non-infringement based on the "substantially straight" limitation in claims 1-2, 4-6, 9-13, 15, 17-18, 20-33, and 35-44 be denied.

As to claim 45, which is the sole '668 Patent claim that incorporates the transition phrase "consisting of," the Special Master observed that the phrase "amounts to 'a term of patent convention meaning that the claimed invention contains only what is expressly set forth in the claim.'" (R&R at 75, quoting *Norian Corp. v. Stryker Corp.*, 363 F.3d 1321, 1331 (Fed. Cir. 2004).) He further observed that TRW did not account for the implications of the use of that transition phrase in claim 45, and thus he had "no basis to determine the propriety of TRW's non-infringement argument beyond its assertions for those claims

drafted using the open, ‘comprising’ phrase.” (R&R at 75-76.) Accordingly, the Special Master recommended that TRW’s motion for summary judgment of non-infringement based on the “substantially straight” limitation found in claim 45 be denied.

This Court accepts and adopts the Special Master’s recommendation that TRW’s motion for summary judgment of non-infringement be denied as to these claims and overrules TRW’s objections. The Special Master properly concluded that only two of the compartments need to be substantially straight to satisfy this limitation. Moreover, viewing the one example provided by TRW, a reasonable jury could find two substantially straight chambers and thus find infringement either literally or equivalently.

III. Conclusion

For the above-stated reasons, this Court ACCEPTS AND ADOPTS the Special Master’s Report and Recommendation and thus GRANTS IN PART AND DENIES IN PART TRW’s motion for summary judgment of invalidity, DENIES TRW’s motion for summary judgment of non-infringement, DENIES ATI’s motion to strike paragraphs 2-10 of the declaration of Bruce Hill, and DENIES WITHOUT PREJUDICE ATI’s motion *in limine* to exclude evidence regarding the alleged prior art “Autoliv” and “TRW” devices.

s/Nancy G. Edmunds

Nancy G. Edmunds
United States District Judge

Dated: September 27, 2006

I hereby certify that a copy of the foregoing document was served upon counsel of record on September 27, 2006, by electronic and/or ordinary mail.

s/Carol A. Hemeyer

Case Manager

